

**REMARKS**

Upon entry of this reply, claims 1-3, 7-12, 14 and 16-44 will remain pending. Claims 1, 2, 3, 8, 9 and 10 are independent claims.

Reconsideration and allowance of the application are respectfully requested.

**Response to Formal Matters**

Applicants express appreciation for the return of the Form PTO-1449 with the Office Action confirming the Examiner's consideration of the Supplemental Information Disclosure Statement filed December 9, 2002 whereby the Examiner's consideration of the Supplemental Information Disclosure Statement is of record.

Applicants are submitting on even date herewith a Second Supplemental Information Disclosure Statement. The Examiner is respectfully requested to consider the information cited therein, and to forward an initialed copy of the Form PTO-1449 submitted therewith to Applicants with the next communication from the Patent and Trademark Office.

**Response To Indication Of Allowable Subject Matter**

Applicants express appreciation for the indication that claims 2, 3, 7, 9-12, 14, 16-20, 25-32 and 37-44 are allowed.

However, for the reasons set forth below, Applicants respectfully submit that each of the pending claims is allowable, and allowance of each of the pending claims, i.e., claims 1-3, 7-12, 14 and 16-44, is respectfully requested with the early mailing of the Notices of Allowance and Allowability.

**Response To Anticipation Rejection Based Upon JP 2001-031484**

Claims 1, 8, 21-24 and 33-36 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 2001-031484 (JP '484).

In response, Applicants respectfully submit that this rejection is without appropriate basis, and should be withdrawn at least for the reason that JP '484, as indicated in the Supplemental Information Disclosure Statement filed December 2, 2002, should not be considered to be prior art. In particular, JP' 484 was laid-open February 6, 2001, which laid-open date is subsequent to the U.S. filing date of December 4, 2000 of the present national stage application based upon the filing of International Application No. PCT/JP00/08584 designating the United States on that date.

Accordingly, this document should not be considered to constitute 35 U.S.C. 102(a) prior art, and the rejection should be withdrawn.

**Response To Obviousness Rejection Based Upon JP 10-045,467**

Claims 1, 8, 23 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-045,467 (JP '467).

In this ground of rejection, it is asserted that JP '467 is silent to the method used to form the sprayed coating ceramic layer. The rejection asserts that the burden is on the Applicant to establish that the claimed product is different from the prior art. Regarding claim 8, the rejection asserts that any known method for forming a multiple oxide containing coating can be used in the absence of a teaching of criticality in forming the coating by spraying. Still further, the Office Action has

responded to Applicants' arguments by asserting that "internal member" is intended use and would be obvious, and that the claims do not recite any particular  $Y_2O_3$  content.

In response, Applicants respectfully submit that independent claim 1 is directed to an internal member for a plasma treating vessel comprising a substrate and a  $Y_2O_3$  sprayed coating covered on a surface thereof. Moreover, dependent claim 23 further defines that the  $Y_2O_3$  sprayed coating consists essentially of  $Y_2O_3$ . Still further, Applicants respectfully submit that independent claim 8 is directed to a method of producing an internal member for a plasma treating vessel, which comprises covering  $Y_2O_3$  on a surface of a substrate through a spraying process to form a  $Y_2O_3$  sprayed coating. Moreover, dependent claim 35 further defines that the  $Y_2O_3$  sprayed coating consists essentially of  $Y_2O_3$ .

In contrast, JP '467 discloses as recited in claim 1 thereof, "A corrosive member in which a place exposed to a fluorine-based corrosion gas or its plasma is made of a composite oxide containing a metal of Group 3a in the Periodic Table and Al and/or Si". In particular, the invention disclosed in JP '467 is concerned with the composite oxide of Y and Al and/or Si, but is not directed to a technique of forming a spray-coated film made of  $Y_2O_3$  oxide, or formed consisting essentially of  $Y_2O_3$  coating on the substrate surface.

Further, JP '467 discloses at paragraph [0018], lines 1 to 7 that, "The corrosive member according to the invention is not only the above sintered body, but also may be formed as a thin film on a given surface of a substrate by well-known thin-film forming processes such as PVD process, CVD process and the like. Also, it may be a thin film formed by applying a liquid phase through a well-known sol-gel process and sintering it. Among them, the sintered body formed by shaping

powder and firing is most preferable because it is excellent in the applicability on any members." In JP '467, the sintered body is fundamental, and the member formed by PVD or CVD process is acceptable. JP '467 does not teach or suggest the film formation through a spraying process. Moreover, one having ordinary skill in the art would not have been motivated to utilize a spraying process following the disclosure of JP '467.

The rejection merely makes a naked assertion that it would have been obvious to one of ordinary skill in the art at the time of the invention to have used any known method for forming a multiple oxide containing coating, including thermally spraying, in order to have formed a coating which was a sintered compact of oxide materials.

The Examiner is reminded that a rejection must be based upon documentary evidence, and not merely official notice. In this regard, the Examiner's attention is directed to MPEP 2144.03 wherein it is noted that, "If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position." In the instant situation, Applicants respectfully submit that the rejection is improper as not utilizing documentary evidence to support the position taken in the rejection. Thus, Applicants request that the rejection be modified to include documentary evidence supporting the positions taken in the rejections.

Moreover, attention is directed to In re Ahlert and Kruger, 424 F.2d 1088, 165 USPQ 418, 420-421 (CCPA 1970), which is cited in MPEP 2144.03. In Ahlert, at 165 USPQ 421, it is stated that:

Typically, it is found necessary to take notice of facts which may be used to supplement or clarify the teaching of a reference disclosure, perhaps to justify or explain a particular inference to be drawn from the reference teaching. The facts so noticed serve to "fill in the gaps" which might exist in the evidentiary showing made

by the examiner to support a particular ground of rejection. We know of no case in which facts judicially noticed comprised the principal evidence upon which a rejection was based or were of such importance as to constitute a new ground of rejection when combined with the other evidence previously used.

In the instant case, the rejection improperly utilizes Official Notice, not to "fill in the gaps", but to provide the complete reasoning behind modification of the primary reference. Accordingly, Applicants submit that it is improper to take Official Notice in the instant case, and a reference must be utilized in the rejection that not only discloses Applicants' recited concept, but also provides motivation for modifying JP '467 to include Applicants' recited features.

Thus, Applicants respectfully submit that the claims are not properly rejectable over the prior art, whereby the rejection of the claims should be withdrawn as being without appropriate basis.

The reason why PVD or CVD process of poor efficiency is disclosed in JP '467 is considered due to the fact that the members used in the plasma treating vessel do not need to withstand a corrosive gas unless it is a dense coating layer, i.e., substantially no pores. In JP '467, it is also considered that the member is peeled off in the plasma treating vessel under severer conditions unless the member is formed by carefully piling the coatings one upon the other according to the PVD or CVD process. That is, JP '467 does not consider a spraying process at all.

In JP '467, therefore, it is not disclosed that (1) the sprayed coating of  $Y_2O_3$  having pores is formed on the substrate surface, and (2) by a spraying process which can produce a coating at a high speed. In this connection, the present invention puts the sprayed coating into practical use as described in the examples. Moreover, attention is directed, for example, to Example 2 wherein the advantages of spray coating are illustrated. Still further attention is directed to page 9, lines 3-6, where it is disclosed that the  $Y_2O_3$  sprayed coating covered on the surface of the member according

to the invention is particularly useful for the use under plasma environment generated in an atmosphere containing a halogen compound. Thus, it is seen that Applicants' originally filed disclosure provides unexpected advantages associated with Applicants'  $Y_2O_3$  sprayed coating covered on a surface and its method of product. Therefore, Applicants have established on the record that the product rejected in Applicants' claims is different from the prior art of record, and is produced by a method that is not taught or suggested in the prior art or record.

As seen from the above, JP '467 discloses the composite oxide of  $Y_2O_3$  and  $SiO_2$ , but does not disclose a surface coating consisting essentially of  $Y_2O_3$ . Moreover, JP '467 does not teach nor suggest a sprayed coating of  $Y_2O_3$ . This is clear from the description on paragraph [0019] of JP '467 that, "Various materials shown in Tables 1-3 are prepared by using various oxide powders. In Table 1, Sample Nos. 1-5 are prepared by fusing a mixture of rare earth oxide in Table 1 and  $SiO_2$  and/or  $Al_2O_3$  at 2000°C and quenching to conduct vitrification. Sample Nos. 6 and 7 are formed by firing a shaped body of  $Y_2O_3$  and  $SiO_2$  at a given mixing ratio at 1300-1600°C. Sample Nos. 8-13 are formed by firing a shaped body of a mixture of  $Y_2O_3$  and  $Al_2O_3$  in an oxidizing atmosphere or under vacuum at 1600-1900°C. Sample Nos. 14, 15 are formed by firing a shaped body of a mixture of rare earth oxide of Table 1 and  $Al_2O_3$  at 1400-1750°C. Sample Nos. 16, 17 are formed by sputtering process of  $Sc_2O_3$  and  $Al_2O_3$  as a target. Moreover, all of the sintered bodies are densified above a relative density of not less than 95%".

JP '467 does not teach or suggest, amongst other features of Applicants' invention, an internal member for a plasma treating vessel comprising a substrate and a  $Y_2O_3$  sprayed coating covered on

a surface thereof or its method of production, as recited in Applicants' claims 1 and 8; and the  $Y_2O_3$  sprayed coating consisting essentially of  $Y_2O_3$ , as recited in Applicants' claims 23 and 35.

Thus, Applicants respectfully submit that the only teaching or suggestion that would lead one having ordinary skill in the art to arrive at Applicants' invention is within Applicants' disclosure, and the use of such disclosure by the Examiner is improper. In order to support the conclusion that the claimed invention is either anticipated or rendered obvious over the prior art, the prior art must either expressly or inherently teach the claimed invention or the Examiner must present a convincing line of reasoning why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. Ex parte Clapp, 227 U.S.P.Q. 972 (B.O.A. 1985).

Accordingly, the rejections of record should be withdrawn as improper, and all of the claims should be indicated as allowable over the prior art.

### CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims.

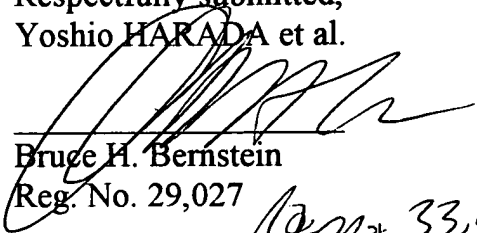
Applicants therefore respectfully request that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

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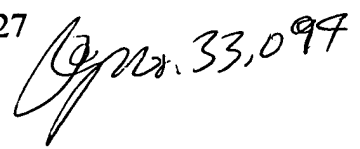
Application No. 09/890,251

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
Yoshio HARADA et al.

  
Bruce H. Bernstein  
Reg. No. 29,027

June 17, 2003  
GREENBLUM & BERNSTEIN, P.L.C.  
1950 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191

 33,097